Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (currently amended) A system comprising:

a processor;

a sensor interface responsive to the processor; and

memory responsive to the processor, the memory including program instructions operable to direct the processor to:

implement a kernel-mode device driver for gathering data via the sensor interface and for manipulating a journal based data system;

implement a plurality of variable definitions in the journal based data system, each variable definition of the plurality of variable definitions being associated with at least one sensor and indicating a data type for environmental data gathered from the associated at least one sensor;

implement a plurality of variable update records ~~record~~ in the journal based data system, each variable update record ~~records~~ of the plurality of variable update records being associated with at least one of the plurality of variable definitions and having a value of the data type indicated by the associated at least one of the plurality of variable definitions;

gather, via the kernel-mode device driver, the environmental data from the at least one sensor; and

store the environmental data in at least one of the plurality of variable update records associated with at least one of the plurality of variable definitions associated with the at least one sensor.

2.   (original) The system of claim 1, wherein the kernel-mode device driver runs with supervisor privilege within a kernel of an operating system.

3.   (original) The system of claim 1, wherein the kernel-mode device driver comprises code that runs with kernel privilege and provides access to a hardware device.

4.   (original) The system of claim 1, wherein the memory further comprises program instructions for implementing a monitoring application.

5.   (original) The system of claim 1, further comprising a network interface responsive to the processor.

6.   (original) The system of claim 5, wherein the memory further comprises program instructions for implementing a notification application for communicating data events via the network interface.

7.   (original) The system of claim 5, wherein the memory further comprises program instructions for implementing a web server for communicating data via the network interface.

8.   (previously presented) The system of claim 1, wherein the memory further comprises program instructions for implementing each variable definition of the plurality of variable definitions to indicate a data type for at least one of temperature data, humidity data, airflow data, video data, audio data and dry-contact data.

9.   (previously presented) The system of claim 8, wherein the memory further comprises program instructions for implementing each variable definition of the plurality of variable definitions to have an associated variable and to include an oldest update field and a latest update field.

10.   (previously presented) The system of claim 1, wherein the memory further comprises program instructions for implementing each variable update record of the plurality of variable

update records to have a data type for at least one of temperature data, humidity data, airflow data, video data, audio data and dry-contact data.

11. (previously presented) The system of claim 1, wherein the memory further comprises program instructions for implementing each variable update record of the plurality of variable update records to have an associated variable and to include a next update pointer and a previous update pointer.

12. (previously presented) The system of claim 11, wherein the memory further comprises program instructions for implementing the previous update pointer to point to an oldest update field of a variable definition associated with the associated variable.

13. (previously presented) The system of claim 11, wherein the memory further comprises program instructions for implementing the next update pointer to point to the latest update field of a variable definition associated with the associated variable.

14. (previously presented) The system of claim 1, wherein the memory further comprises program instructions for implementing a context record in the journal based data system.

15. (previously presented) The system of claim 14, wherein the memory further comprises program instructions for implementing a current timestamp field in the context record.

16. (previously presented) The system of claim 14, wherein the memory further comprises program instructions for implementing, in the context record, a next update field including a pointer to a next update in a global journal of update records.

17-35. (canceled)

36. (currently amended) A method for processing data from a sensor comprising:
    storing, in memory, program instructions operable to direct a processor to:

implement a kernel-mode device driver for gathering data via a sensor interface and for manipulating a journal based data system;

implement a plurality of variable definitions in the journal based data system, each variable definition of the plurality of variable definitions being associated with at least one sensor and indicating a data type for environmental data gathered from the associated at least one sensor;

implement a plurality of variable update records in the journal based data system, each variable update record ~~records~~ of the plurality of variable update records being associated with at least one of the plurality of variable definitions and having a value of the data type indicated by the associated at least one of the plurality of variable definitions;

executing, by a processor, the program instructions;

gathering, by the implemented kernel-mode device driver, the environmental data from the at least one sensor via the sensor interface; and

storing the environmental data in at least one of the plurality of variable update records associated with at least one of the plurality of variable definitions associated with the at least one sensor.

37.   (previously presented) The method of claim 36, wherein executing, by the processor, the program instructions implementing the kernel-mode device driver comprises implementing a kernel-mode device driver that executes with supervisor privilege within a kernel of an operating system.

38.   (previously presented) The method of claim 36, further comprising storing, in the memory, program instructions for implementing a monitoring application.

39.   (currently amended) A computer readable storage medium having stored thereon sequences of instructions including instructions that will cause a processor to:

store, in memory, program instructions operable to direct the processor to:

implement a kernel-mode device driver for gathering data via a sensor interface and for manipulating a journal based data system;

implement a plurality of variable definitions in the journal based data system, each variable definition of the plurality of variable definitions being associated with at least one sensor and indicating a data type for environmental data gathered from the associated at least one sensor;

implement a plurality of variable update records in the journal based data system, each variable update record ~~records~~ of the plurality of variable update records being associated with at least one of the plurality of variable definitions and having a value of the data type indicated by the associated at least one of the plurality of variable definitions;

execute the program instructions;

gather, by the implemented kernel-mode device driver, environmental data from the at least one sensor via a sensor interface; and

store the environmental data in at least one of the plurality of variable update records associated with at least one of the plurality of variable definitions associated with the at least one sensor.

40.   (previously presented) The method of claim 36, further comprising decoding, from an XML-encoded file, a value of at least one persistent variable included in the journal based data system.